



Promoting Data Integrity for the Department of Defense

***Presented to:
DoD Environmental Monitoring
and Data Quality Workshop 2011***

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Environmental Data Quality Workgroup

Charter Issued 01 October 2010

- Develop and recommend policy related to sampling, testing, and quality assurance for environmental programs to eliminate redundancy, streamline programs, improve data quality, and promote data integrity.
- Coordinate the exchange of information among DoD components.
- Develop DoD issuances to implement environmental quality systems and promote cost effective government oversight.
- Implement and provide oversight of the DoD ELAP.

Strategy To Achieve Charter Tasking

Identify Industry
and DoD Best
Practices



Save time, reduce program costs,
ensure decisions are based on
sound data

- Implement national and international standards
- Use systematic planning process
- Improve management and contracting practices
- QA/QC policy/guidance
- Improve oversight
- Promote consistency

EDQW Initiatives

- Intergovernmental Data Quality Task Force (IDQTF)
- Interstate Technology & Regulatory Council (ITRC)
- Strategic Environmental Research And Development Program / Environmental Security Technology Certification Program (SERDP/ESTCP)
- Chemical and Material Risk Management Directorate
- Field Sampling and Testing
- DoD/DOE Collaboration
- Laboratory Accreditation

IDQTF

- Optimizing UFP-QAPP
 - *Lessons Learned from DoD Implementation*
 - *Coordinating update with EPA Quality Staff to ensure consistency with EPA G-5 update*
- New UFP-QAPP Training
 - *Training focus on implementation*
 - *Demonstration of project scoping session*
 - *Focus on Systematic Planning Process and Documentation*

ITRC

Incremental Sampling Methodology (ISM)

- EDQW supported the creation of the ISM Team.
- ISM Team developing guidance for the implementation of ISM for a wide range of sampling objectives, analytes, and circumstances that will:
 - *Provide a practical working knowledge of the concepts and principles of the methodology.*
 - *Emphasize the critical importance of sampling objectives.*
 - *Provide basis for adapting ISM to meet project objectives.*
 - *Help avoid misapplication of the approach.*
- Draft document planned for summer 2011

SERDP/ESTCP

- *Providing technical support to SERDP/ESTCP*
 - *Participate in progress reviews*
 - *Provide Data Quality Support for Reviews*
 - *Quality Control*
 - *Quality Assurance*
 - *Sampling design*
- **Goal is to ensure that resulting products are:**
 - *Of documented quality*
 - *Reproducible*
 - *Defensible*

Chemical and Material Risk Management Directorate

- Reviewing proposed IRIS Database update
 - *Preparing method summary:*
 - Applicability
 - Availability
 - Capabilities of DoD ELAP laboratories
 - LOD/LOQ
 - *Identifying analytes with no currently available analytical methods*
 - *Identifying analytes where currently available methods can not be used to report results to proposed IRIS values*

Field Sampling and Testing

- Largest Component of Analytical Uncertainty
- DoD Sampling Manual
 - *Combined/Updated existing Services Sampling Manuals*
 - *Includes new sections on:*
 - Air sampling
 - Groundwater sampling
 - Incremental sampling (will be added based on ITRC document)
 - Sediment sampling
 - Soil gas sampling
- Field Sampling Data Quality
 - *Field Assessments*
 - *Field Quality Standards*

DoD / DOE Joint Initiative

- DoD QSM / DOE QSAS
 - *DoD/DOE “QSMAS” coming soon!!!!*
 - Consolidation of DoD QSM and DOE QSAS
 - Compliant with 2009 TNI standard
- Benefits
 - *Unified approach to LOD and LOQ.*
 - *Use of tables for minimum QC in the absence of project direction.*
 - *Unified radiochemical definitions and requirements.*
 - *Unified legal/evidentiary custody and LIMS requirements.*
 - *Unified requirements for hazardous and radioactive materials management.*
 - *Consistent uniform direction from both DOE and DoD programs.*

EDQW Issuances

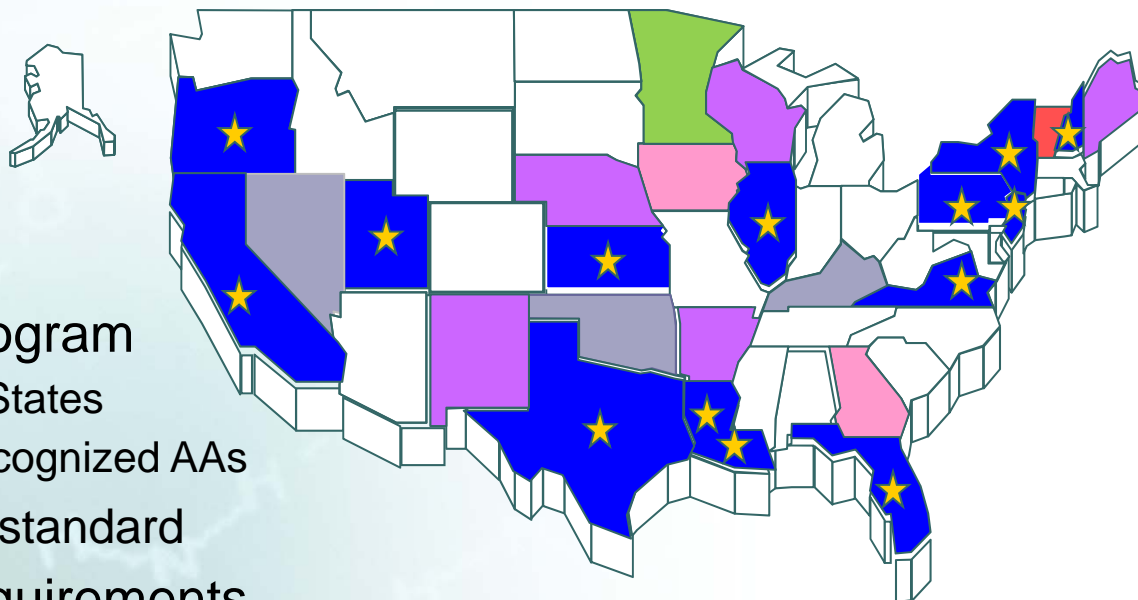
Since last EMDQ

- *DoD EDQW Charter*
- *DoD QSM V4.2*
 - *Incorporation of FAQ responses*
 - *PT Flexibility for initial and continuing acceptability (GB43)*
 - *Summary of DoD QSM V4.2 Changes*
 - *Updated QSM FAQs*
- *DoD ELAP SOP – Complaints*
- *DoD EDQW – Guidance for Ensuring DoD ELAP Accredited Laboratories are Capable of Meeting Project-Specific Requirements*
- *DoD ELAP SOP – Project Specific Approval*

The National Environmental Laboratory Accreditation Program (NELAP)

Issues:

- Not required by EPA
- Not truly a national program
 - Not recognized by all States
 - 14 States – NELAP recognized AAs
- Implementation of TNI standard
- Possible additional requirements by individual States
- Reciprocity
- Inconsistencies
 - Assessments
 - Implementation



TNI Consistency Improvement Task Force

Four Major Goals

1. Establish realistic expectations about consistency
2. Improve consistency of laboratory assessments
3. Improve consistency of accreditation body evaluations
4. Engage laboratories and users of data to improve consistency

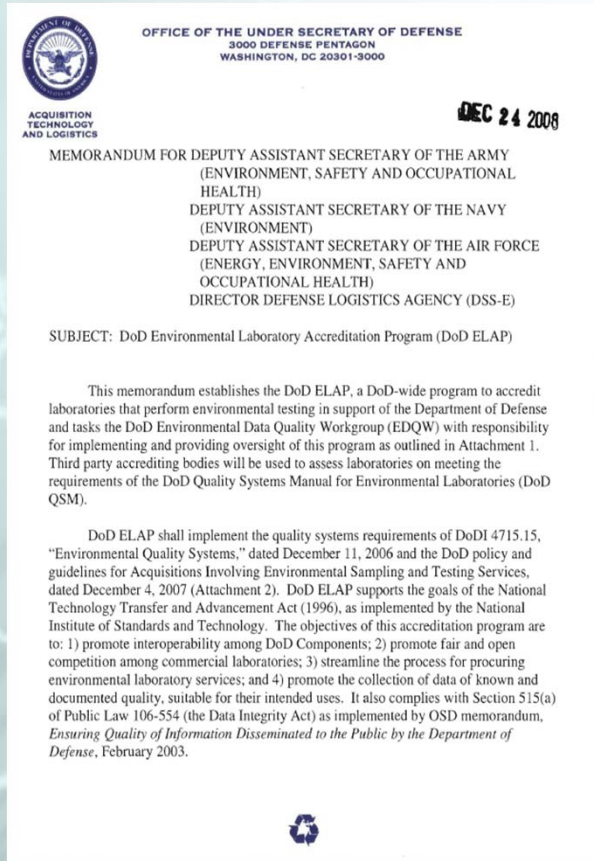
Accreditation Consistency

- What is necessary for “Consistency”?
 - *Unified standard*
 - *Trained assessors*
 - *Uniform interpretation of the requisite standard*
 - *Unified checklists*
 - *Standardized assessment procedures*
 - *Reports that clearly detail finding and reference*
 - *Follow-up on completion corrective actions*
 - *Periodic on-site assessments*
- Will an accreditation that meets all of these requirements ensure laboratory performance?

Laboratory Performance

- How do customers ensure laboratory performance?
 - *Accreditation does not guarantee performance.*
 - *Analysis by trained and qualified personnel does not guarantee mistake free testing.*
 - *Performing testing as detailed in SOPs does not guarantee accuracy of data.*
 - *Operation IAW QS does not guarantee usability of results.*
- If there are no guarantees, how do we accept results?
 - *Lab must notify customer of discrepancies or issues related to the testing.*
 - *Lab must accurately report results and associated QC data.*
 - *We, the customers, must verify the lab's capabilities and review the data and associated QC.*

DoD Environmental Laboratory Accreditation Program (DoD ELAP)



- Est. by ADUSD(ESOH)
- Effective 1 October 2009
- Objectives:
 - *Promote reciprocity;*
 - *Promote fair and open competition;*
 - *Streamline procurement process;*
 - *Promote the collection of data of known and documented quality, suitable for their intended uses; and*
 - *Allow DoD to focus on project specific reviews*

***DoD Instruction 4715.15, Environmental Quality Systems
being revised to require use of DoD ELAP***

DoD ELAP

Requirements

- DoD-wide program acceptance
- Applies to collection of *definitive data* for environmental restoration programs
- Laboratory compliance with DoD QSM
- Accreditation performed by ABs
- EDQW perform oversight of program
- Project managers select accredited laboratories

DoD ELAP

Accreditation Bodies

- American Association for Laboratory Accreditation (A2LA)
- ANSI-ASQ National Accreditation Board (ACLASS)
- Laboratory Accreditation Bureau (L-A-B)
- Perry Johnson Laboratory Accreditation, Inc. (PJLA)

DoD ELAP

Accreditation Issues

- Labs not in compliance with standard at the time of the assessment
- Assessment consistency
- Scope creep
- Project specific reviews
- Project specific approvals
- Lab not meeting project needs after selection
- Complaints
- LOD/LOQ

DoD ELAP

Implementation Issues

- *“The laboratory didn’t perform up to project expectations!”*
 - *Project Specific Reviews*
- *“No laboratory is accredited for the testing that I need to have performed!”*
 - *Project Specific Approvals*
- *“My laboratory needs to add methods to our DoD ELAP accredited scope!”*
 - *Contact AB – all ABs will expand scope*
- *“My laboratory is a mobile not a fixed laboratory!”*
 - *All ABs have procedures for accreditation*
 - *DoD QSM V4.2 – PT flexibility (GB43)*

DoD ELAP – Status

(as of 03/24/11)

- 97 laboratories applied for DoD ELAP accreditation
- 96 laboratories assessed
- 76 laboratories accredited
- EDQW is monitoring assessments
- DENIX website is operational providing:
 - *Searchable database of accredited laboratories*
 - *Scopes of accreditation to method*
 - *Link to accrediting AB's website*

DoD ELAP Distribution

Accredited/Applied

State	Labs	State	Labs	State/Province	Labs
Alaska	1	Maine	1	Oklahoma	0/1
Arizona	0/1	Maryland	2	Oregon	1
Arkansas	1/2	Massachusetts	3	Pennsylvania	3 / 4
California	11 / 14	Michigan	4 / 5	Rhode Island	2
Colorado	2	Minnesota	1	South Carolina	3
Florida	5/6	Missouri	2 / 3	Tennessee	3
Georgia	2	Nevada	1 / 2	Texas	5 / 7
Hawaii	1	New Hampshire	1	Utah	1
Illinois	1 / 3	New Jersey	2	Vermont	1
Indiana	1	New York	1 / 2	Virginia	0 / 1
Kansas	1	North Carolina	3	Washington	4 / 5
Louisiana	2	Ohio	2 / 4	Wisconsin	2
				Ontario	0 / 1

DoD ELAP

Effect on availability and selection?

- Component Approved Labs (01 Oct 2009) – 44
 - *Applied for DoD ELAP Accreditation – 42*
 - *DoD ELAP Accredited – 42*
- Loss
 - *2 labs expired and did not apply*
- Benefit
 - *32 additional labs accredited*
 - *53 additional labs applied*
 - *11 additional States*

DoD ELAP Resources

- DoD ELAP Fact Sheet
- DoD QSM V4.2
- Detection and Quantitation Fact Sheet
- DoD ELAP & QSM FAQ's
- DoD EM/DQ Workshop Information
- Policy Memos
- Published on websites:
 - <https://www.denix.osd.mil/portal/page/portal/EDQW>
 - www.navylabs.navy.mil

DoD ELAP Complaint Process

- Complaints may be:
 - *Referred to the laboratory or AB as appropriate*
 - *Returned to the complainant for additional information*
 - *Referred to the QAOS for review and recommended response*
 - *Reject the complaint*
 - *Referred to legal counsel*
- EDQW will:
 - *Notify the complainant of action taken*
 - *Issue final resolution when EDQW is the appropriate body for resolving the complaint*
 - *Monitor the status and resolution of all complaints*

DoD ELAP is a Success!!

- Pre - DoD ELAP (10/01/09)
 - *44 Labs*
 - *25 States*
- DoD ELAP Accredited (03/24/11)
 - *76 Labs*
 - *36 States*
- DoD ELAP Applicants
 - *97 Labs*
 - *36 States and Canada*
 - *Continuing to grow*

Challenges & Opportunities:

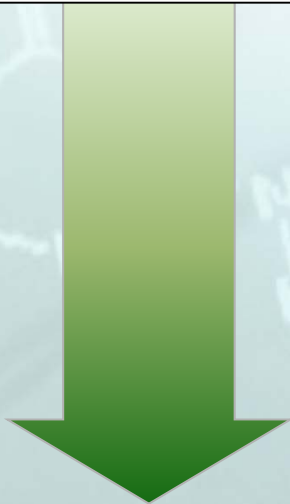
DoD ELAP Addresses Quality Issues Affecting Mission & Operations

- 95% of DoD lab testing is outsourced
 - *No national mandate for laboratory accreditation*
- Varied requirements (federal, state, local)
 - *Increasingly stringent criteria*
 - *Inadequate method capability*
 - *Implementation of TNI standard*
 - *Conflicting standards*
- Limited resources for oversight
 - *Tightening State and Federal Budgets*
 - *Availability of qualified assessors*

Scientifically valid and legally defensible data are required to make informed decisions

Actions To Achieve Charter Tasking

Identify Industry
and DoD Best
Practices

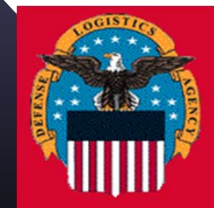
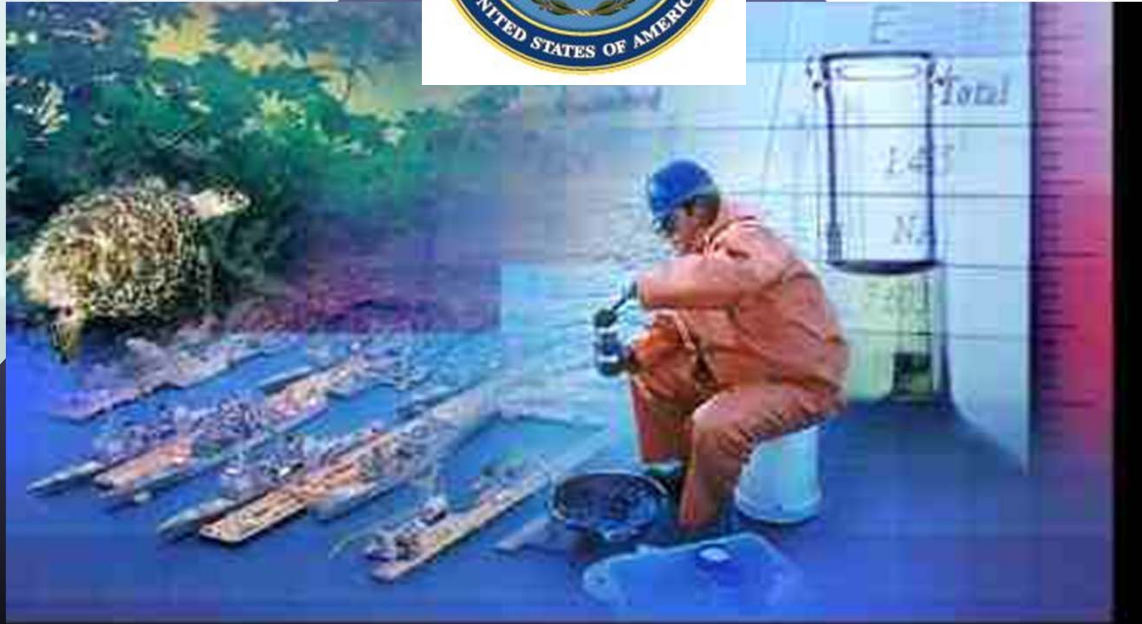


Save time, reduce program costs,
ensure decisions are based on
sound data

- DoD QSM – Implement national and international standards
- UFP QAPP – Use systematic planning process
- Procurement Policy – Improve management and contracting practices
- Guidelines for PSR – QA/QC policy/guidance
- DoD ELAP – Improve oversight
- DoD ELAP – Promote consistency

Improving Environmental Data Quality

... Because the Right Decisions Require Quality Data



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